

Remarks

Claims 1 through 23 remain pending in the application.

The specification is amended according to 37 CFR 1.77(b) and (c). Per 37 CFR 1.77(c), superfluous headings are not added.

Claim 23 is amended to address the potential double patenting issue identified by the Examiner.

Claims 18 and 19 are amended to cure the indefiniteness identified by the Examiner.

Claims 1 through 21 are rejected as directed to non-statutory subject matter. Claim 1 is amended to tie the method to a specific apparatus, namely, an encoder.

The Office Action rejects claims 1, 2, 22 and 23 as obvious over Wang, et al., Digital Video Signal Encoder And Encoding Method Having Adjustable Quantization U.S Patent 6,118,187 in view of Li, et al., A novel Rate Control Scheme for Video Over the Internet, under the assertion that Wang teaches a method for controlling the rate for encoding a video sequence comprising a plurality of Group of Pictures which in turn comprise at least an I-frame and an Inter-frame, and determining a desired frame rate based on available bandwidth and computational resources, and that Li teaches determining a target buffer level based on a desired frame rate, and determining a target bit rate based on the target buffer level and the available channel bandwidth, and using the target bit rate for controlling the rate for encoding a video sequence, and the further assertion that it would have

been obvious to incorporate the teaching of Li into Wang for providing improved rate control.

The Examiner fails to provide any motivation or rationale for the proposed combination of Wang and Li, other than the benefit provided by the claimed invention. The mere identification of a benefit provided by the claimed invention does not suffice as the rationale that one of skill in the art would be motivated to make the combination claimed. It does not provide any reasoning as to why knowledge of the goal of improving rate control would lead an artisan to make the particular modifications. Also, there is no indication that either Li or Wang were in any way deficient, such that artisans would expect an improvement by combining them.

The proposed combination does not result in the claimed invention because Wang is missing elements ascribed to him. Wang discloses a method for encoding a motion video signal comprising, inter alia, a step of determining a desired size for the first frame of the motion video signal, the desired size being a function of the total amount of bandwidth available (see, for example, claim 1 of Wang). The passages col. 7 line 50 to col. 8 line 1 as cited by the Examiner merely teaches determination of a desired size of encoded P-frame based on available bandwidth. Wang further describes the determination of frame rate which is also based on available bandwidth (see, for example, col. 5 line 10 to col. 6 line 15 and FIG. 8 of Wang). However, contrary to the assessment by the Examiner, Wang does not teach the determination of a desired frame rate based on available computational resources for the encoding process as recited in claim 1. Rather, Wang is completely silent about such a feature. Thus, the claimed invention cannot be achieved

by combining Wang and Li, and a prima facie case of obviousness had not been made out.

The proposed combination does not result in the claimed invention because Li is missing elements ascribed to him. Contrary to the Examiner's assessment, Li does not teach the determination of a target buffer level based on the position of the Inter-frame with respect to the I-frame. Rather, as can be seen in the col. 2 of page 2066 of Li, the target buffer level is determined differently for different kinds of frames but not the position of the frame with respect to the I-frame. That is, formula (5) defines the calculation of buffer level for each of the P frames and formula (6) defines the calculation of the buffer level for each of the B frames. This indicates that all the P frames according to Li would have a same buffer level no matter the position of the each of the P frames. Similarly, according to Li, all the B frames would have the same buffer level no matter the position of each of the B frames. Thus, Li does not teach the determination of a target buffer level based on the position of the Inter-frame with respect to the I-frame. Thus, the claimed invention cannot be achieved by combining Wang and Li because two distinct elements of claims 1, 2, 22 and 23 are not found in either reference, and a prima facie case of obviousness had not been made out.

It is not possible that one of skill in the art would be motivated to combine Wang and Li to achieve the claimed invention, nor is it possible to "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" per KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007), because the references do not disclose all the recited

claim elements. That is, even if there is some reason to combine Wang and Li, they cannot be combined so as to achieve the combination of claims 1, 2, 22 and 23 which require the steps (or a device adapted to perform the steps) of determining a desired frame rate based on available computational resources for the encoding process and determining a target buffer level based on the position of the Inter-frame with respect to the I-frame as recited in claim 1.

Claim 2 is rejected as obvious over Wang and Li, in view of Nago, Method For Regulating Image Quality, Picture Communication Equipment Using Same And Recording Medium Having Recorded Therein A Program For Executing The Method, U.S. Patent 6,567,117 (May 20, 2003). As discussed above, Wang and Li do not disclose at least two elements of the claim, so that no prima facie case of obviousness is established.

The Office Action rejects claim 18 as obvious over Wang and Li in view of "Well Known Prior Art" under the assertion that the additional limitation of claim 18 are so well known in the art that official notice is appropriate. However, "It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known." MPEP 2144.03. The additional limitations of claim 18 are not apparently capable of instant and unquestionable demonstration. In addition, claim 18 should be allowable as dependent on an otherwise allowable base claim, according to the explanation provide above regarding claim 1.

Conclusion

This response has addressed all of the Examiner's grounds for rejection. The rejections based on prior art have been traversed. Reconsideration of the rejections and allowance of the claims is requested.

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